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Kim et al.

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[54] **CONSTANT-DENSITY MAGNETIC DISC APPARATUS AND MAGNETIC DISC USED THEREFOR**

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[52] **U.S. Cl.** 360/51; 360/48

[58] **Field of Search** 360/48, 49, 51, 360/77.08

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,682,253 7/1987 Leslie .
 4,811,135 3/1989 Janz .
 4,823,212 4/1989 Knowles et al. .
 4,956,727 9/1990 Bezinque et al. 360/49
 4,977,472 12/1990 Volz et al. .
 5,121,280 6/1992 King .
 5,257,149 10/1993 Meyer 360/78.14

5,278,703 1/1994 Rub et al. 360/51
 5,327,302 7/1994 Khoury et al. 360/51 X
 5,345,342 9/1994 Abbott et al. 360/48
 5,544,135 8/1996 Akin, Jr. et al. 360/77.08 X
 5,587,850 12/1996 Ton-that 360/77.08
 5,631,783 5/1997 Park 360/51

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[57]

ABSTRACT

A magnetic disc used in a constant-density magnetic disc driving apparatus includes a wedge identification field following a servo information area that contains a wedge identification for identifying a plurality of data sectors located within a corresponding data information area. A pseudo identification field positioned at a first portion of each data sector represents a time interval required to generate from the wedge identification a pseudo identification that identifies a corresponding one of the data sectors and transfer the pseudo identification to a controller of the magnetic disc driving apparatus. The pseudo identification field includes a data preamble for providing data synchronization for the corresponding data sector. A data field is positioned behind the pseudo identification field, and the data field and pseudo identification field make up a single data sector. Data that is identified by the pseudo identification and synchronized by the data preamble is written in the data field.

13 Claims, 5 Drawing Sheets

